

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 36, line 10 with the following amended paragraph:

FIG. 11 is a flow chart illustrating the process of setting up an EFIB at a core router according to one embodiment of the present invention. At step 1100, a path object is received from the previous hop along an explicit route. At step ~~1100~~ 1110, a look up is performed on the EFIB of the receiving router using the global path ID in the received path object as an index. At step 1120, a decision is made depending on whether an entry indexed by the global path ID in the received path object already exists or not. If an entry already exists, then the process ends at step 1125, at which point a determination is made that a new EFIB is not necessary, probably because the received path object relates to a path that merges at the router receiving the path object.

Please replace the paragraph beginning at page 38, line 1 with the following amended paragraph:

FIG. 13 is a flow chart illustrating the packet forwarding process at a core router according to an embodiment of the present invention. At step 1300, a router along an explicit path receives a packet from the previous hop along the path. At step 1310, the router determines whether the received packet contains a global path ID according to the present invention. If not (e.g., if the field where the global path ID is expected is empty or invalid), at step 1320, the process shown in FIG. 13 terminates, and the packet is forwarded using the default routes provided by the underlying routing algorithms, such as OSPF or BGP. However, if at step 1310, it is determined that the packet contains a global path ID according to aspects of the present

invention, at step 1330 a look-up is performed on the EFIB of the receiving router using the global ID of the received packet as an index. Assuming there is a match in the EFIB, at step 1340, the corresponding outgoing global path ID and next hop information (both of which should have been previously written into the EFIB in the manner described earlier with reference to FIG. 11) are extracted from the EFIB. At step 1350, the global path ID in the packet is replaced with the new outgoing global path ID retrieved from the EFIB, and at step ~~1460~~ 1360, the packet is forwarded to the next hop using the next hop information retrieved from the EFIB.